

CLAIMS

1. A heat shield for a vibration insulator, the vibration insulator having a frame having an outer surface; the heat shield comprising:

a cup-shaped body defining a chamber;

the chamber adapted to receive the insulator; the body adapted to shield the chamber from an external heat source.

2. The heat shield of claim 1, wherein the body is manufactured from an elastomer.

3. The heat shield of claim 2, wherein the elastomer is a silicone elastomer.

4. The heat shield of claim 3, wherein the elastomer is a silicone elastomer selected from the group ASTM D2000 classification GE, FC, FE and FK.

5. The heat shield of claim 2, wherein the elastomer is fluorolastomer.

6. The heat shield of claim 1, wherein the body is manufactured from ethylene acrylic.
7. The heat shield of claim 1, wherein the body is shaped like a diamond with rounded corners.
8. The heat shield of claim 5, wherein the body includes straight sidewalls extending between the rounded corners.
9. The heat shield of claim 1, wherein the body further comprises at least one internal bead projecting into the chamber; the bead adapted to engage the insulator.
10. The heat shield of claim 9, wherein the body further comprises a second internal bead projecting into the chamber; the second internal bead being disposed opposite the first bead; the first and second beads being adapted to cooperate to hold the heat shield on the insulator.
11. The heat shield of claim 1, wherein the body has a base and a side wall, and the base defines at least one aperture.

12. In combination, a heat shield and a vibration insulator for a vehicle exhaust system; the combination comprising:
- an insulator having a frame with an outer surface; a front surface and
- 5 a rear surface; and

a heat shield having a cup-shaped body defining a chamber; the insulator being substantially disposed within the chamber; the heat shield adapted to insulate the insulator from an external heat source.

- 10 13. The combination of claim 12, wherein the heat shield is manufactured from a flexible, heat-resistant material.

14. The combination of claim 13, wherein the heat shield is manufactured from an elastomer.

- 15 15. The combination of claim 14, wherein the heat shield is manufactured from a silicone elastomer.

- 20 16. The combination of claim 15, wherein the heat shield is manufactured from a silicone elastomer selected from the group ASTM D2000 classification GE, FC, FE and FK.

17. The combination of claim 14, wherein the elastomer is fluorolastomer.
18. The combination of claim 14, wherein the body is manufactured from ethylene acrylic.
19. The combination of claim 12, wherein the heat shield includes at least one internal bead projecting into the chamber; the bead adapted to hold the heat shield on the insulator.
20. The combination of claim 19, wherein the insulator includes an external projection; the projection adapted to cooperate with the bead to hold the heat shield on the insulator.
21. The combination of claim 12, wherein the heat shield and insulator form air spaces between them.
22. The combination of claim 21, wherein the frame of the insulator includes protuberances and valleys defined between the protuberances; wherein the body of the heat shield includes sidewalls;

and the air spaces are formed between the valleys of the frame and the sidewalls of the heat shield.

23. The combination of claim 21, wherein the frame of the insulator has first front surface and the protuberances have a second front surface; the second front surface of the protuberances extending further outwardly from the frame than the first front surface; and the second front surface abuts the heat shield and the air spaces are formed between the heat shield and the first front surface of the insulator.
24. The combination of claim 12; wherein the body of the heat shield is shaped like a diamond with rounded corners.
25. The combination of claim 24, wherein the body includes straight sidewalls extending between the rounded corners.
26. An improved motor vehicle having a chassis and an exhaust system, the exhaust system having an exhaust pipe and a hanger connecting the exhaust pipe to the chassis; a vibration insulator disposed on the hanger, the vibration insulator having a frame having an outer surface; the improvement comprising:

a heat shield; the heat shield having a cup-shaped body defining a chamber; the chamber adapted to receive the vibration insulator; the body adapted to shield the chamber from an external heat source.

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27. The improvement of claim 26, wherein the heat shield is manufactured from a flexible, heat resistant material.

28. The improvement of claim 27, wherein the heat shield is manufactured from an elastomer.

29. The improvement of claim 28, wherein the heat shield is manufactured from a silicone elastomer.

30. The improvement of claim 29, wherein the heat shield is manufactured from a silicone elastomer selected from the group ASTM D2000 classification GE, FC, FE and FK.

31. The improvement of claim 28, wherein the elastomer is fluorolastomer.

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32. The heat shield of claim 27, wherein the body is manufactured from ethylene acrylic.

33. The improvement of claim 26, wherein the heat shield provides air gaps between the heat shield and the insulator.

5 34. The heat shield of claim 1, wherein the body is manufactured from ethylene acrylic.

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